

REMARKS

1. Rejection of claims 1-20 under 35 U.S.C. 103(a) as being anticipated by Sato (US 5,349,239) or Shirakawa (EP 1 077 494), both in view of Li (US 5,696,466):

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Claims 1, 13, and 17 are amended to recite that the transistor is "integrally formed on the substrate". Such amendment is fully supported by the disclosure, particularly by Figs.3 and 5 for instance. No new matter is entered by these amendments.

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Claims 1-20 are rejected with combinations of Sato and Li, and Shirakawa and Li for reasons of record. The applicant respectfully asserts that the amended claims 1, 13, and 17 and their dependents are not obvious by either combination.

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In US 5,696,466, Li discloses a heterolithic microwave integrated impedance matching circuit including at least an input matching circuit 301, a transistor 302 (i.e. a common base Si BJT), and an output matching circuit 303. More particularly, Li discloses forming impedance matching circuits for a discrete power transistor. In Li, the transistor disclosed is a discrete power transistor, and is not integrally formed on the substrate 401 (column 5, line 24). Rather, Li discloses that the discrete power transistor is mounted to the substrate 401 by solder bump metallurgy, for example, by reflowing an Au:Sn solder at 320 °C for five minutes (column 6, lines 35 to 38). Li further discloses fabrication details of the power transistor in column 6, lines 13 to 34.

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Since neither the combination of Sato and Li nor that of Shirakawa and Li teach or suggest a transistor integrally formed on the substrate as recited in the amended claims 1, 13, and 17, the applicant asserts that claims 1, 13, and 17 should be patentable over combinations of Sato and Li, and Shirakawa and Li.

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Reconsideration of claims 1-20 is politely requested. Claims 2-12, 14-16, and 18-20 are dependent on claims 1, 13, and 17 and should be allowed if claims 1, 13, and 17 are allowed.

2. Rejection of claims 21-22 under 35 U.S.C. 103(a) as being anticipated by Sato (US 5,349,239) in view of Li (US 5,696,466), and rejection of claims 23-24 under 35 U.S.C. 103(a) as being anticipated by Shirakawa (EP 1 077 494) in view of Sato (US 5,349,239):

In Sato, the emitter layer 5 is divided into four short strip shaped finger portions 5a arranged in parallel, however, these short strip shaped finger portions 5a are located above or below the collector 8 (see Figs.1-3). That is, Sato's finger portions 5a are not located laterally away from the collector 8, the plain meaning of "laterally away" being taken as "removed from in a sideways direction". The applicant asserts that one of ordinary skill in the art would consider the lateral directions in Figs.1-3 of Sato to be page-left and page-right, and the above and below directions in Figs.2-3 of Sato to be respectively page-top and page-bottom. Clearly, Sato (or Shirakawa or Li for that matter) does not disclose an "emitter including an enlarged portion located laterally away from the collector and the base" as recited in claims 21 and 23. As such, the combination of Sato and Li and that of Shirakawa and Sato do not teach or suggest all the limitations of claims 21 and 23 respectively.

Reconsideration of claims 21-24 is politely requested in view of the above. Claim 22 is dependent on claim 21 and should be allowed if claim 21 is allowed. Claim 24 is dependent on claim 23 and should be allowed if claim 23 is allowed.

3. New claims 25-26:

Dependent claims 25-26 are introduced to further limit the transistors of claims 21 and 23 respectively to be "integrally formed on the substrate". Such addition is fully supported by the disclosure, particularly by Figs.3 and 5 for instance. No new matter is entered by these new claims.

The comments made above for claims 1-20 regarding Li's teachings also apply to new claims 25-26.

Consideration of new claims 25-26 is politely requested. Claims 25-26 are dependent on claims 21 and 23 respectively and should be allowed if claims 21 and 23 are allowed.

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Sincerely,



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